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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/234,490	01/21/1999	KATSUYA IRIE	1082-1027/JD	6014

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EXAMINER

QUARTERMAN, KEVIN J

ART UNIT PAPER NUMBER

2879

DATE MAILED: 10/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/234,490

Applicant(s)

IRIE ET AL.

Examiner

Kevin Quarterman

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 58-75 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 58-75 is/are rejected.
- 7) ☒ Claim(s) 72 and 73 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>17</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 06 August 2003 has been entered.

Response to Amendment

2. Applicant's Amendment E, filed 06 August 2003, has been entered.

Claim Objections

3. Claims 72-73 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

5. Claims 58-75 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Independent claim 58 states "...a light-emission intensity of at least one of the fluorescent substances of red, green, and blue is set to be larger than would be necessary to display an intended white color." It is unclear what *would be necessary* to display an intended white color. Applicant has provided no known standard of what light-emission intensity would be necessary to display the white color (See MPEP § 2173). Therefore, one having ordinary skill in the art would have no way of determining a light-emission intensity of the fluorescent substance that would be larger than what would be necessary to display the white color without having some standard of doing so.

7. Due to their dependency upon independent claim 58, claims 59-75 are also deemed indefinite.

Claim Rejections - 35 USC § 102

8. Claims 58-59, 63-71 are rejected under 35 U.S.C. 102(e) as being anticipated by Ueoka (USPN 6034474).

9. Regarding independent claim 58 and claim 59, Figure 2 of Ueoka shows gas discharge device using a plasma display panel comprising a plurality of discharge cells (10) formed within a discharge space between a front substrate (1) and a rear substrate (5), each of the discharge cells including a discharge gas therein and being provided with one of fluorescent substances of red (8r), green (8g), and blue (8b) selected to emit light for performing color display; and a filter (3r) disposed on a front side of the front substrate, the filter having a characteristic of absorbing light within a wave range of visible light emitted by the discharge gas.

10. Regarding claims 63-68, while features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function (MPEP § 2114). Therefore, the filter of Ueoka inherently possesses each of the functional characteristics claimed, since there is no structural difference provided (MPEP § 2112.01).

11. Regarding claim 69, Figure 2 of Ueoka shows the filter formed directly on an inner or outer surface of one of the substrates that constitutes a display surface of the display device.

12. Regarding claim 70, Figure 2 of Ueoka shows the filter disposed on a front side of the display panel.

13. Regarding claim 71, Ueoka discloses that the display panel is provided with a transparent protection plate and the filter is disposed on an inner or outer surface of the protection plate (col. 7, ln. 38-41).

Claim Rejections - 35 USC § 103

14. Claims 60-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueoka (US 6034474) in view of Betsui (US 5825128).

15. Regarding claims 60-62, Ueoka teaches the limitations of independent claim 58, as discussed earlier. Figure 2 of Ueoka also shows a pair of electrodes (2, 6) for generating electric discharge between the electrodes to allow the fluorescent substances to emit light; a light-emission region; and a dielectric substance layer (4, 7) covering each pair of electrodes.

16. Ueoka fails to exemplify each of the discharge cells having the red fluorescent substance having areas larger than the areas of the discharge cells having the blue and green fluorescent substances.

17. Figure 3 of Betsui teaches that it is known in the art to provide plasma display panels with discharge cells having red fluorescent substance with areas larger than the areas of the discharge cells having the blue and green fluorescent substances for enhancing the brightness of the display (col. 2, ln. 35-37).

18. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the structure of Ueoka with the discharge cell structure taught by Betsui for improving the display.

19. Claim 74 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ueoka (US 6034474) in view of Asano (US 6008582).

20. Regarding claims 21 and 54, Ueoka disclose the claimed invention but fail to exemplify the fluorescent substance for red is composed of (Y, Gd) BO₃:Eu; the fluorescent substance for green is composed of Zn₂SiO₄:Mn; and the fluorescent substance for blue is composed of BaMgAl₁₀O₁₇.

21. Asano, in the same art of display devices, teach that suitable phosphor substances for red, green, and blue are (Y, Gd)BO₃:Eu, Zn₂SiO₄:Mn, and BaMgAl₁₀O₁₇, respectively (col. 6, ln. 38-46). Asano uses these compositions for emitting light of desired color.

22. Therefore, it would have been obvious to a person having ordinary skill in the art to provide fluorescent substances for red, blue, and green with the compositions taught

by Asano in the display device of Ueoka for the purpose of emitting multiple-colored light.

23. Claim 75 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ueoka (US 6034474) in view of Raber (US 4803402).

24. Ueoka disclose the claimed invention but fail to exemplify a discharge space filled with a Penning gas composed of neon and xenon.

25. Raber, in the same art of display devices, discloses a Penning mixture of neon doped with argon or xenon (col. 4, ln. 4-44). This Penning mixture is used for emitting light of an electric field near the projected intersection of electrode wires (col. 3, ln. 33-41).

26. Therefore, it would have been obvious to a person having ordinary skill in the art to utilize the Penning mixture as taught by Raber in the gas discharge display device of Ueoka for emitting light onto the display panel.

Response to Arguments

27. Applicant's arguments filed 06 August 2003 have been fully considered but they are not persuasive.

28. In response to applicant's argument regarding the rejections under 35 USC § 112, second paragraph, the Examiner has provided an analysis as to why the phrase used in the claim is vague and indefinite.

29. In response to applicant's argument that the claimed filter is disposed on the front side of the front substrate and not on a display side, as taught in Ueoka, the Examiner interprets the display side in Ueoka to be the front side of the substrate.

30. In response to applicant's arguments about functional language, the Examiner notes that recitation of a newly discovered function or property, inherently possessed by things in the prior art, does not cause a claim drawn to distinguish over the prior art. Additionally, where the Patent Office has reason to believe that a functional limitation asserted to be critical for establishing novelty in the claimed subject matter may, in fact, be an inherent characteristic of the prior art, it possesses the authority to require the applicant to prove that the subject matter shown in the prior art does not possess the characteristics relied on. *In re Swinehart*, 169 USPQ 226 (CCPA 1971).

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Quarterman whose telephone number is (703) 308-6546. The examiner can normally be reached on M-F (8-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (703) 305-4794. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7382 for regular communications and (703) 308-7382 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Joseph Williams *Joseph Williams*
Sr

Kevin Quarterman
Examiner
Art Unit 2879

Nimesh Patel
Supervisory Patent Examiner
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kq *KQ*
October 1, 2003